



# IMMS

TECHNICAL BULLETIN OF THE INTEGRATED MAINTENANCE  
MANAGEMENT SYSTEM PROJECT



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## IMMS Implementation

### Technical Overview

In previous Technical Bulletins, we have provided you with information about the Integrated Maintenance Management System (IMMS), described its benefits, and told you about its key features, such as the Visual Resource Manager and Work Orders. In this issue, we will provide you with some information about the important technical aspects of IMMS, including how it works and how we are testing IMMS.

IMMS will be different from MMSI in many ways; one of the most important differences is that with MMSI, information is entered into the end-user's desktop computer and can only be accessed at that computer. With IMMS, all end-users will be able to access the same information at the same time, as we'll explain below. This will allow management and staff in Headquarters, districts, regions and the field to access the same information and generate all needed reports. In addition, supervisors will now have access to information about available resources and work being done by supervisors, even in other regions or districts!

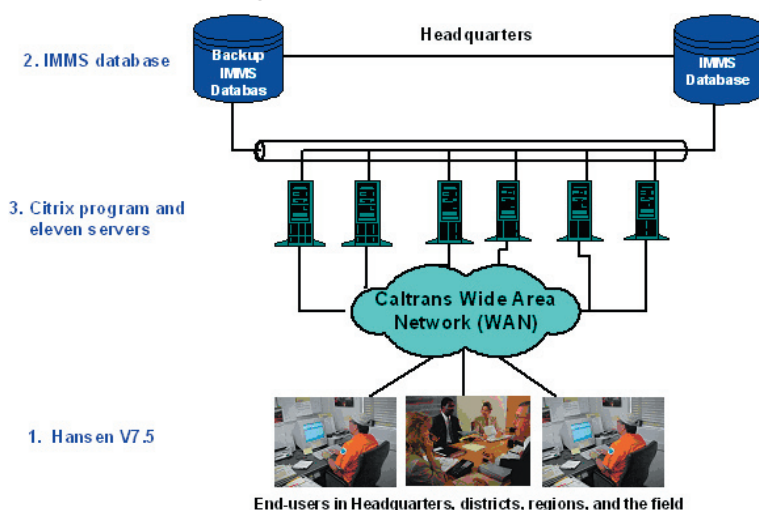
So how does IMMS work? Figure 1 demonstrates how IMMS is made up of several pieces. The first piece is **Hansen V7.5**, the computer program at the core of IMMS. All end-users (that's you!) will use this program to create work orders, enter time and work information, adjust working stock, and view information about IMMS assets.

The second piece is the **IMMS database**. When you view or enter information into IMMS from your office, you are not really looking at information on your desktop computer. Rather, you are looking directly at the IMMS database, located at Headquarters in Sacramento. All of the information you enter is stored in this database. End-users throughout the state will have the ability to input information directly into the IMMS database through one of 11 servers.

These **11 servers** and a computer program called **Citrix** work together to form the third piece of IMMS. Citrix directs all information moving to and from the database to one of the servers. IMMS will use multiple servers to handle the busy periods, when supervisors throughout the state may be accessing IMMS at the same time. This helps to ensure that all of the information you enter is updated quickly and that you have easy access to the information you need.

Another important aspect of IMMS is testing. The IMMS Team is testing the Hansen software and IMMS data to ensure that IMMS meets the needs of all end-users. Following are descriptions of the types of testing we are performing:

Figure 1: How IMMS Works



Information is sent from end-users, such as supervisors or region staff, to one of eleven servers. The servers process the information and direct it to the IMMS database. All of this happens within a matter of seconds! In addition, the Maintenance Division will use a backup database to ensure that all data is captured in case problems occur with the IMMS database.

- **Functional testing** ensures that the Hansen software works correctly;
- **Performance testing** ensures that IMMS can handle many people using it at the same time;

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- **User Acceptance testing** tests whether IMMS meets the Maintenance Division's business needs; and
- **Integrated Systems testing** tests whether the functions an end-user would perform in a typical day, including interfaces with other systems, work properly.

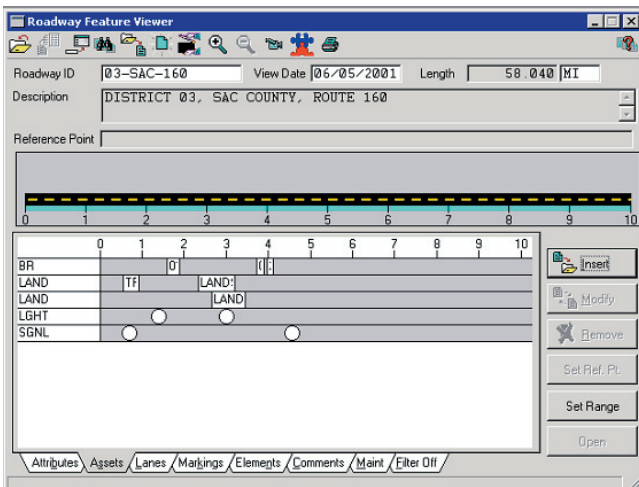
## IMMS Feature of the Month

### Roadway Feature Viewer

The key function of the Maintenance Division is to perform work activities on Caltrans-maintained assets, such as lights, signals, bridges, landscape areas, and the roadway. IMMS will give supervisors access to detailed information about each asset, where it is physically located on the roadway, and work being performed on the asset.

The IMMS Roadway Feature Viewer (Viewer) provides a convenient way for supervisors to view information about a roadway. For example, supervisors can easily see the locations of assets along the roadway (see figure 2), information about work being performed on an asset, such as a signal, or the location of work being performed on a portion of the roadway. Supervisors will also have access to information about the roadway itself, such as the number of lanes or speed limit.

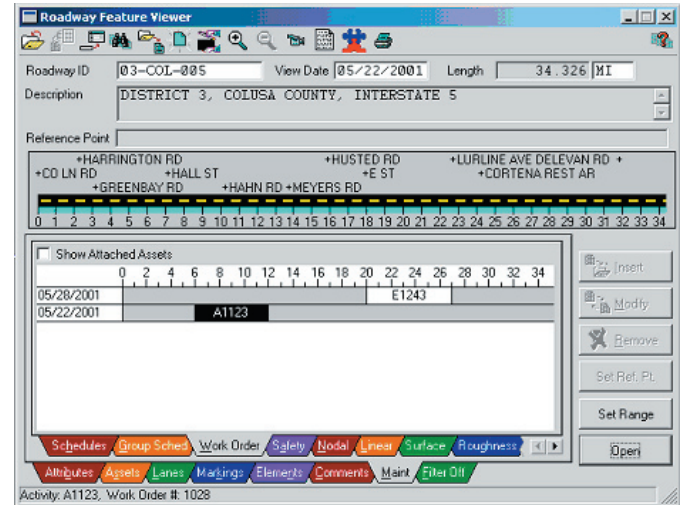
Figure 2: Roadway Feature Viewer - Assets



In figure 2, the supervisor can see that there are several bridges, landscape areas, lights, and signals on this roadway. For details about an asset, the supervisor can simply highlight the asset and click "Open" to access the asset inventory information.

In addition, supervisors can use the Viewer to locate an individual asset and then create a work order for the asset. If a supervisor is planning work for a specific section of roadway, he/she can check the Viewer to see if any other work is being performed at or near the location (see figure 3). This would alert the supervisor to conflicts or help him/her to coordinate the sharing of resources more easily.

Figure 3: Roadway Feature Viewer - Work Orders



Here the supervisor can see that there are two work activities, a crack seal operation and a mowing operation, planned on this roadway. For details about a scheduled activity, the supervisor can simply highlight the activity and click "Open" to access the work order.

## Contributors

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